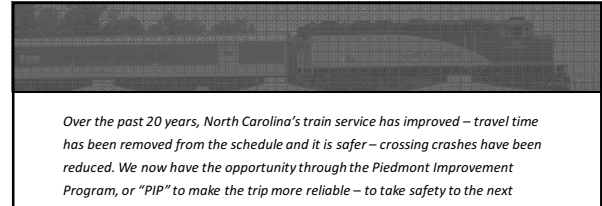


PIP My Ride

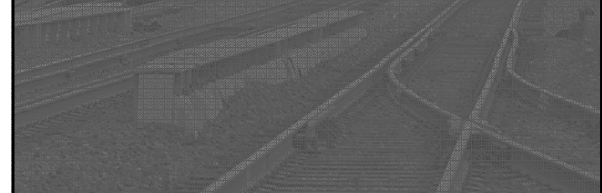
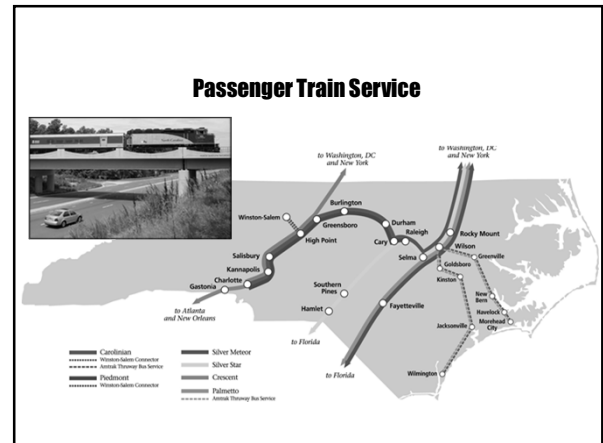
North Carolina Department of Transportation
Public Transportation Division
34th Community Transportation Conference
January 8, 2014

Brian Speight, PE
Senior Project Manager




Over the past 20 years, North Carolina's train service has improved – travel time has been removed from the schedule and it is safer – crossing crashes have been reduced. We now have the opportunity through the Piedmont Improvement Program, or "PIP" to make the trip more reliable – to take safety to the next level.

It's time to...

Piedmont Improvement Program – First, some history...



Gov. Martin speaks at inauguration of Carolinian service, May 25th, 1990

- Passenger Rail Task Force – Created by Gov. James Martin, March, 1988 by Executive Order No. 71
- Charged with determining appropriate state response to longer-term rail passenger opportunities in NC
- 1989 Recommendations**
 - Essential rail corridors be preserved for future rail passenger and freight transportation use
 - NC should provide intercity rail passenger service in the Charlotte-Greensboro-Raleigh corridor
- 1990 Carolinian** passenger rail service resumed after 5-year hiatus

Piedmont Improvement Program – First, some history...

- 1992 – Southeast High Speed Rail Corridor (SEHSR)** designated by USDOT from Washington to Charlotte.
- 1992 – NCDOT** began **signalizing 1,090 crossings** on passenger routes and **closed 229** redundant crossings
- 1995 – Began Piedmont passenger rail service and Sealed Corridor Initiative** to further improve crossing safety.
- 2002 – NC Railroad Improvement Project (NCRRIP, 2002-09)** added passing sidings, signals, smoothed curves, reduced travel times.

Legend:

- Federally Designated SEHSR Corridor Status
- Tier 1 EIS R00 completed 2002
- Tier 2 EIS R00 2014
- Tier 3 EIS R00 completed 2012
- ARRA Incremental Improvements to be completed by 2017
- Tier 4 EIS begins 2013
- No Scheduled Projects
- Tier 1 EIS begun 2012

Piedmont Improvement Program – First, some history...

2002 – present:

- Train stations and multimodal centers refurbished/built statewide with FHWA Enhancement Funds and NCDOT Moving Ahead Funds
- Piedmont fleet equipment upgraded and/or refurbished
- Tracks/sidings upgraded for fewer delays and allow longer freight trains
- Signals added/curves smoothed to allow higher speeds
- Studies look at passenger service to Eastern and Western North Carolina



J. Douglas Galyon Depot, Greensboro's premier multi-modal transportation center.

2010 – Demand increases, midday Piedmont service added

Charlotte – Raleigh
3 Hours 10 Minutes

We've been
Working on the Railroad

Safer Railroads

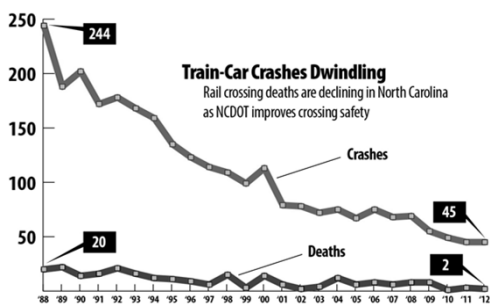
More Capacity

Better Schedules

1 Hour
10 Minutes
shaved
from
schedule
since
1990



25 Years of Progress – Crossing Crashes Decreased



Piedmont Improvement Program Funding

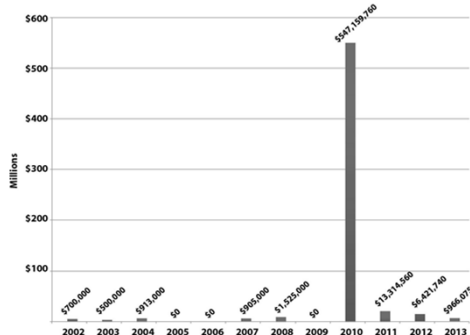
- 2009 – NCDOT was awarded \$546.5 million in FRA grants to fund a series of rail projects along the Piedmont corridor between Charlotte and Raleigh.

Grants benefit Passenger and Freight:

- Safer and more reliable train service
- Increased railroad capacity
- Job growth and commercial development opportunities
- Better connectivity between Raleigh and Charlotte and towns in between
- Better equipment and stations to support North Carolina's Piedmont and Carolinian train service
- Introduction of a 3rd and 4th Frequency



Rail Division Federal – Funding History



Piedmont Improvement Program Funding

The grant money is *limited* and must be spent and be reimbursed for all projects by:

September 30, 2017
Grant funds will expire!



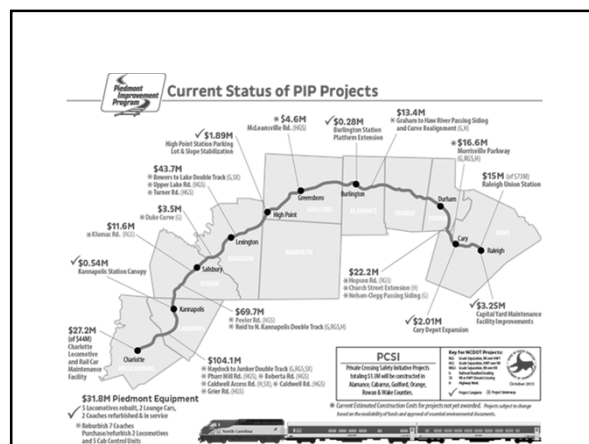
Piedmont Improvement Program Funding

Grant Award by Component

- Track & Structures – 11 projects
- Station & Facilities – 8 projects
- Equipment – 4 projects
- Project Development & Administration
- Congestion Mitigation – 4 projects



North Carolina Railroad Company/photographer: Nick D'Amato



Track & Structures

We must improve these lines to meet – and stay ahead of – growth demands forecast for North Carolina in the next 20 years.

Track and Structure Highlights

- Build 2 new passing sidings on the NCRR between Greensboro and Raleigh
- Complete double tracking of NCRR between Charlotte and Greensboro – **Widening the Railroad**
- Track crossover improvements for efficiency
- Build 13 highway overpasses or underpasses of the railroad to separate auto and train traffic – safety and mobility
- Overpasses and underpasses replace up to 23 public at-grade crossings
- Freight and industry access retained or improved – **All Trains Use All Tracks**



PIP Delivery Approach



NCDOT expanding an industry by exposing this type of work to a wider range of NC contractors



NCDOT Standard Let
Bridge & Road Construction



NCDOT Let – Roadbed Prep
Earthwork, Grading & Drainage



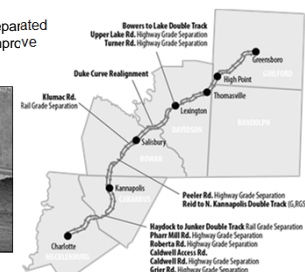
NS Let – From Ballast up
Track & Signals

Main Line RR Projects, Charlotte – Greensboro

- Double track three remaining single-track sections of the mainline to increase capacity and reliability for passenger and freight service
- Major bottlenecks eliminated
- Eight crossings will be grade separated and Duke Curve realigned to improve traffic flow and safety



Duke Curve, looking north



Main Line RR Projects Underway, Charlotte – Greensboro

Upper Lake Road – Highway Grade Separation

- Builds a bridge for highway traffic on Upper Lake Rd. to go over the railroad and eliminates the hazard of the railroad at-grade crossing



Main Line RR Projects Underway, Charlotte – Greensboro

Turner Road – Highway Grade Separation

- Builds a bridge for highway traffic on Turner Rd. to go over the railroad and eliminates the hazard of the railroad at-grade crossing



Main Line RR Projects Underway, Charlotte – Greensboro

Klumac Road – Rail Grade Separation

- A bridge will replace the existing crossing of Klumac Road and the North Carolina Railroad/Norfolk Southern Railway tracks in Salisbury
- Allows unimpeded traffic flow under the tracks at all times



H-Line Projects, Greensboro – Raleigh

- Build two passing sidings along single track railroad to close 14-mile and 22-mile gaps with no passing location on the NCRR
- Build three grade separations and align a curve to improve safety, capacity and traffic flow



H-Line Projects Underway, Greensboro – Raleigh

Hopson Road Grade Separation & Nelson to Clegg Passing Siding

- Builds a bridge to carry trains over Hopson Rd. and eliminates the hazard of the railroad at-grade crossing, eliminates a bottleneck caused by existing 14-mile stretch of single track and realigns curves



Graham to Haw River Passing Siding and Curve Realignment

- Eliminates a bottleneck caused by an existing 22-mile stretch of single track and train speed increase with curve realignment

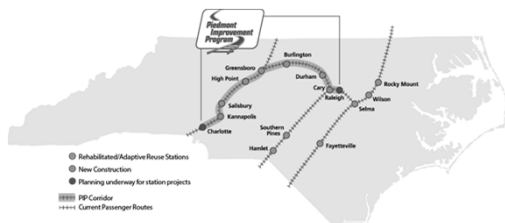


Stations & Facilities

North Carolina's Train Stations serve intercity rail passengers and help make regional and local public transportation connections. NCDOT has facilitated construction and/or restoration of 13 stations along passenger routes statewide.

PIP Train Station Improvements

In addition to improvements at Cary, Burlington, High Point and Kannapolis stations, backup generators were installed at Burlington and Salisbury stations and one maintenance facility has been improved one newly constructed. Security Systems have been installed at 8 stations and Passenger Information Display Systems are being designed.



PIP Train Station Improvements—Cary Amtrak Station

In Cary, train passengers had a small waiting room in a building occupied by NC DMV, who moved to a larger location. The building was enlarged and is now a bustling, full-service Amtrak Station and is served by Cary Transit.



PIP Train Station Improvements—High Point

At the High Point Station, inadequate parking was a daily challenge. PIP funds stabilized the slope above the tracks, added 27 parking spaces and improved the grounds with landscaping. The project was completed in 2011.



The High Point Station is located across the tracks from the Hi-tran bus transfer center. PART Route 5-NC Amtrak Connector links the station with Winston-Salem.

PIP Train Station Improvements—Burlington

The Burlington Station Platform was extended 200 feet to allow passengers to board more safely and quickly. This PIP project was completed in 2011.



PIP Train Station Improvements—Kannapolis

Kannapolis Station Canopy construction, completed in September 2013, provides shelter and a safer boarding area for train passengers.



Concord Kannapolis Area Transit's Rider Blue Route serves the Amtrak Station.

PIP Maintenance Facility Improvements

Capital Yard Maintenance Facility in Raleigh was expanded. The improvements were completed in March 2012. The *Piedmont* fleet is serviced and maintained at this facility.



A new Charlotte Maintenance Facility is in design and property is being acquired. This will be used for layover and maintenance.



Slide 29

H1 scheduled for completion
I think it all done
HM, 1/2/2014



Piedmont Equipment

State-Sponsored Piedmont train service, which runs from Raleigh to Charlotte, was number one in the nation in growth within the Amtrak system for 2012. The Carolinian is also posting increased ridership and revenue numbers.

The Piedmont Fleet

- Our equipment model – with input from NC General Assembly – purchase good, used equipment and refurbish to like new
- Less than half the cost of new equipment – no debt



The Piedmont Fleet

- PIP funding has refurbished five locomotives, two lounge cars and two coaches – now in daily *Piedmont* service
- Seven additional cars, 2 locomotives and 5 cab control units will be refurbished during the next 18 months



Coach interiors, before and after

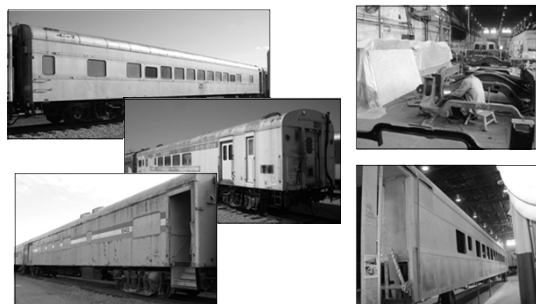
Combine car with baggage and passenger area, before and after



Lounge car interiors with vending and seating areas, before and after



Coaches before refurbishment (left) and with refurbishment underway (right)



Coach exterior, before and after



F59PH and F59PHI Equipment



Challenges and Innovations

- Huge Influx of money in very short amount of time
- Blazing new policy and procedural trails for FRA
- Scope defined by signed agreements with Railroads and FRA
- Capped ARRA Funding – \$545.5M
- Initial and ongoing stakeholder concurrence/approvals
- Fixed End Date – September 2017
- Utilization of Public and Private Resources to form the team and PM systems
- Assignment of Action Items
- Transparency
- Delivery Method



It takes a village...

Freight-passenger partnerships are the key to success in improving NC's railroads

- Success through environment of trust
- Mutual benefits in joint planning and engineering
- Infrastructure and safety improvements – good for all
- Funding partnerships essential

